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# The Faroese Effort Quota Management System

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**Abstract:** This article puts forward an analysis of the effort quota management system that has regulated the valuable demersal fish stocks within Faroese maritime territory since 1996. The article outlines key issues related to Faroese domestic fisheries management and the effectiveness of the effort quota management system. A combined legal and policy analysis reveals that the present entry/exit permit system has failed to restrain effort capacity. Most importantly, demersal fish stocks are in decline and as a result the domestic fishing fleet is not performing well financially. Current permits are due to expire in 2018 but Faroese policy-makers still have wide latitude to alter the current management system or even adopt a new one.

**Key words:** Fisheries management, input controls, effort fishing quotas, sovereignty and property rights.

## 1 Introduction<sup>1</sup>

The Faroe Islands<sup>2</sup> are a self-governing territory within the Kingdom of Denmark with a centuries-old and on-going reliance on marine fishing. In 2012, the combined export value of demersal fish products and pelagic products accounted for 48 % of total exports.<sup>3</sup> Additionally, harvesting and processing marine fish stocks is a considerable source of employment, and represents a significant share of the annual gross domestic product (GDP).<sup>4</sup>

Marine fishing in the Faroe Islands is as much an industry as it is a way of life. Many people own small fishing vessels and fish for personal consumption, and most Faroese feel they have an inherent right to utilise the resources of the ocean that surrounds them as they have done for centuries. The imposition of strict access barriers to the utilisation of these resources, whether for commercial purposes or otherwise, is a politically sensitive topic in the Faroe Islands.

Due to the vital economic and social significance of marine fishing, it is important to understand how the Faroese manage their fisheries, and why this has both practical and academic importance. This article focuses on the comprehensive effort quota system that has been in force since 1996 to manage the valuable demersal fish stocks within the Faroese maritime territory.

The management system will be approached from a legal point of view but we also examine whether it achieves its declared policy objectives. Combining the two subjects of the article requires that certain basic premises be set out that generally apply in the field of domestic fisheries policy. As such, the main contribution of the article is to grasp the realities behind the management of demersal fisheries within the Faroese maritime territory. Further to this is a brief analysis of whether there are any significant barriers against radical alteration of the Faroese effort quota management system or even to adopting a new one. This issue is both timely and pertinent since a review process of the Faroese fisheries legislation commenced in May 2012 and is still on-going.<sup>5</sup>

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  2. This small country is an archipelago consisting of 18 islands inhabited by approx. 48,000 people, covering 1,400 km<sup>2</sup> of land and 274,000 km<sup>2</sup> of sea, located in the northeast Atlantic.
  3. See Hagstova Føroya 2013. The combined value of demersal and pelagic merchandise exports was DKK 2.6 billion.
  4. See for instance Búskaparráðið 2011 p. 10; Hansen and Jákupsstovu 2010 p. 14.
  5. See Fiskimálaráðið 2012b: *Skipan av arbeiðinum*. The review process was still underway when the authors submitted the article (November 2013).

In this article, the basic legal and policy issues in domestic fisheries management are examined, illustrating some benefit but mainly the costs of a typical effort quota management system (Section 2). Next, the legal and policy basis of the Faroese effort quota management system is described in Section 3. In Section 4, an analysis is presented on what kind of legal, practical, and political latitude the Faroese legislature has to alter the current management system or, as the case may be, to adopt another system altogether. Finally, brief conclusions will be provided in Section 5.

## 2 Domestic fisheries policy – legal and policy issues

### 2.1 International legal principles

The United Nation's Convention on the Law of the Sea (UNCLOS)<sup>6</sup> states that the sovereignty<sup>7</sup> of a coastal state extends into the territorial sea (article 2) and that a coastal state has the sovereign right to explore, exploit, conserve and manage living and non-living marine resources within its Exclusive Economic Zone (EEZ).<sup>8</sup> It therefore follows that a coastal state has exclusive authority to regulate fisheries activities within a certain maritime area, usually delimited as 200 nm from so-called baselines. This exclusive right is limited for several reasons, for instance due to environmental concerns (see duty to implement measures to prevent overfishing, article 61 of UNCLOS) and duty of a coastal state to show due regard to the interests of other fishing nations (see access to surplus quota for third countries within the EEZ, article 62 and 69 of UNCLOS).

In spite of these limitations, the international legal order provides a coastal state with wide authority to implement policy within the 200 nm zone “in accordance with its own domestic policy and preferences”.<sup>9</sup> Therefore, the type of domestic fisheries management scheme coastal states adopt is first and foremost a policy

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6. UNCLOS opened for signature on 10 December 1982 in Montego Bay in Jamaica and came into force on 16 November 1994.

7. The term ‘sovereignty’ has been defined as having ... “two facets: internal sovereignty, that is, the supreme authority within the State to make law, and external sovereignty, the legal independence of the State *vis a vis* other sovereign States”, cf. Barnes, Richard, *Property Rights and Natural Resources*, p. 222.

8. See provisions 56(1)(a), 61–62 and 69–70 of UNCLOS. In practise coastal states have normally excluded other states from fishing within the relevant EEZs or EFZs or, as the case may be, coastal states have subjected fishing by foreign states to various strict conditions. Coastal states have stronger sovereign rights in regards to fisheries management within the territorial sea, cf. provisions 2 and 21 of UNCLOS.

9. McRae and Munro 1989 p. 104.

question. It is preferable that the chosen scheme be effective to the extent that it protects fish stocks and their habitat, and ensures the long-term economic viability of commercial fishing industries. Policy analysts, mainly fisheries economists, have gradually set forth principles that are most likely to achieve effective fisheries management.

## 2.2 Policy objectives and core attributes of effort quota systems

A recent report published by the Organization for Economic Cooperation and Development (OECD) claims that “well-defined access and user rights, a sound scientific basis for decisions of catch and effort levels, effective enforcement, and stakeholder involvement in decision-making form the core attributes of effective fisheries management regimes”.<sup>10</sup> In practise, two main regulatory frameworks exist<sup>11</sup> to attain an “effective fisheries management regime”, namely, input control and output control.<sup>12</sup> Most countries use a combination of both controls, while it is less common for a major fishing nation to solely implement a comprehensive system of input controls, referred to as effort quota management. This type of system usually has three core attributes:

1. The system involves sustainability measures, the most important being limit on duration of fishing. This limitation is measured in fishing days, normally defined as 24 hours from the commencement of a fishing trip. Other sustainability measures relate to technical regulations, such as access to fishing areas and usage of fishing gear, as well as regulations on surveillance and enforcement.
2. The system contains various participation measures. In this regard, a permit scheme is usually set up, that determines who can participate as commercial fishermen. As a rule, foreign vessels are either forbidden from participating in domestic fisheries or their participation is severely restricted. Only

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10. OECD 2011 p. 7.

11. This terminology is used since various technical regulations regarding use of fishing gear in certain marine areas and during certain periods is of minor importance in this context. These regulations are normally necessary as auxiliary tools to ensure biological protection of marine fish stocks but play a minimal role in preventing overharvesting and enhancing economic efficiency.

12. Essentially *input controls* attempt to limit catch indirectly through limits on the amount of labour or capital that can be applied to a fishery, while *output controls* usually establish a periodic, commonly annual, total allowable catch for a given fish species and close the fishery once this level is reached, cf. *Sharing the Fish* 1999 p. 20.

permit-holders are allowed to catch fish on a commercial basis. Since there are no catch limitations, some restrictions are imposed on permit holders, vessel size and type of engine, for example. In order to prevent an increase in fleet size, no new fishing vessel can enter the fishing fleet unless another vessel or vessels of similar effort capacity are decommissioned. Thus the permit scheme has the effect of creating a closed-shop arrangement.

3. The effort quota system entails what may be considered as economic measures, including rules on the rights of permit holders. Normally the permit holder acquires an individual effort quota, that is, a certain number of days at sea when he can fish. The cumulative number of individual effort quotas cannot exceed the total number of fishing days allocated. The effort quotas may be transferable, and if so, the transfer is usually subject to various conditions.

The economic effects of the core attributes of a typical effort quota management system have been thoroughly scrutinized over time, and this system is generally considered “to lead to inefficient outcomes”.<sup>13</sup>

## 2.3 Common flaws of effort quota management systems

The main arguments for an effort quota management system are that the freedom of the fishermen is less limited than under a catch quota system, and that fishermen are less likely to discard catch. In theory, if the system is well designed it becomes less expensive to monitor and enforce than alternative systems, such as a catch quota system. However, a typical effort quota management system has inherent weaknesses, the principle drawback being the increased risk of overharvesting.

A typical effort quota management system has several ways of controlling and reducing effort, e.g. limiting the number of licences, placing restrictions on engine power or size and limiting the duration of fishing. However, these measures can in most cases be circumvented. From a management perspective, the fishing effort system “requires constant adaptation to bring it into line with the latest technological developments.”<sup>14</sup> Hannesson notes that it is often difficult to respond to the inevitable ‘technological creep’ in an effort quota system.<sup>15</sup>

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13. *Sharing the Fish* 1999 p. 115. See also OECD 2013 p. 20.

14. World Ocean Review 1 2010: *Fisheries*.

15. Hannesson, Rögnvaldur, *Privatization of the Ocean*, p. 62.

Experience shows that fishermen expand the capacity of their vessels along uncontrolled dimensions ... [t]heir ingenuity knows few limits. Dutch fishermen are reported to have circumvented a limit on the power of the main engine by restraining it and installing auxiliary engines which could supersede the “main” engine’s power. The phrase “capital stuffing” has been coined to describe this phenomenon; a vessel hull has certain similarities with a Thanksgiving turkey, which can be stuffed with various goodies to enhance its qualities.

The problem of ‘technological creep’ leads to two fundamental defects of a typical effort quota management system: overfishing and overcapitalization.<sup>16</sup> Moreover, an effort quota management system tends to become increasingly complicated, leading to overregulation, which in turn makes the system difficult and costly to operate.<sup>17</sup>

### 3 Management of demersal fisheries in the Faroe Islands

#### 3.1 Historical background

The most important demersal stocks within the Faroese EEZ have always been cod,<sup>18</sup> haddock and saithe. In spite of the extension of the Faroese EEZ to 200 nm in 1977, an open-access regime, in combination with various complicated subsidy programmes, continued to be the basis of the Faroese domestic fisheries policy. In 1987, a partial entry/exit scheme for the fishing fleet was introduced.<sup>19</sup> For various reasons, including poor status of the main fish stocks, the Faroese economy collapsed in the early 1990s.<sup>20</sup> Consequently, the Danish government intervened and re-financed the foreign debts of the Faroese Home Rule Government upon several conditions. One of them was a new fisheries management system. This resulted in enactment of the Commercial Fisheries Act (CFA) No. 28/1994.<sup>21</sup>

In line with the initial provisions of the CFA, a catch quota system was put into operation during the period 1994–1996. This meant that the domestic demersal

16. *Sharing the Fish* 1999 pp. 118–119; See also Grafton et al. 2005 pp. 700–701.

17. Healey and Hennessey 1998 pp. 109–119 discusses the consequences of using complex management tools, many of which are similar to that of the Faroese system. See also Arnason 2007 p. 7 on the cost.

18. The Faroese cod stock is actually divided into two management units, one stock belonging to the Faroe Plateau and the other to the Faroe Bank. The Faroe Bank has been closed to all but small jiggers since 2009.

19. See Fiskimálaráðið 2007 p. 16; Løkkegaard et al. 2004 p. 60.

20. See for instance FAO.

21. Ibid. See also Løkkegaard et al. 2004 p. 10.

fisheries in the Faroe Islands were managed with annual TACs where the total quota was divided among individual vessels, and the individual catch quotas were transferable subject to certain conditions. The system quickly became controversial among key participants in the fishing industry, as well as in other segments of society.<sup>22</sup> It was consequently abandoned and a new comprehensive effort quota management system was designed, following amendments to the original CFA in 1996.<sup>23</sup> The CFA has been amended many times since 1996 but the core attributes of the effort quota management system have remained unchanged.

### 3.2 CFA: Purpose and policy principles

The CFA applies to the utilisation of living marine stocks,<sup>24</sup> whether it takes place within the Faroese territorial sea or EEZ. The Act also regulates fishing activities of vessels flying the Faroese flag on the high seas and in other states' EEZ.<sup>25</sup> Utilisation of living marine stocks is to be conducted in a sustainable and rational way, both in biological and economic terms, with due concern for the relationship between stocks of plants and animals in the sea and their abundance, in order to secure optimal flow of benefits for society, constant employment and income, and opportunities for commercial activity all over the Islands.<sup>26</sup>

Article 2, paragraph 1, line 1 of the CFA reads as follows:<sup>27</sup>

The living marine stocks in the Faroese marine territory are the property of the Faroese people and so are the fishing rights outside that territory, which the Faroese Home Rule Government has acquired or is entitled to under international law.

In addition, article 3, paragraph 2 of CFA states that “rights to fish in accordance to this law does not provide any entity or individual with a property right”, and “rights to fish can be revoked without paying any compensation”.<sup>28</sup> It is also stated in article 2, paragraph 3 of CFA that “[t]he main principle of managing living marine stocks not restricted by international or other agreements that the Faroe Islands are bound by is to provide for as much freedom as possible to utilise the resource for fishing vessels flying the Faroese flag”.

22. FAO; Løkkegaard et al. 2004 p. 10.

23. See Acts No 50/1996, 64/1996 and 77/1996 that amended the initial provisions of CFA.

24. The concept of living marine stocks relates to fish stocks, crustaceans, molluscs, other invertebrates and any other living marine resource that is not whale, seal, bird or farmed fish.

25. See art. 1 of the Act.

26. See art. 2(1)(2) of the Act.

27. Translation made by the authors. All translations from Faroese to English are made by the authors unless otherwise stated.

28. See art. 3(2)(2) of the Act.



These statutory provisions indicate that the purpose of the CFA is to promote sustainable utilisation of the living marine stocks as well as their efficient economic utilisation. In this way, constant employment, secure income, and work opportunities as well as commercial activities are promoted all over the Islands. At the same time the CFA states that the resource belongs to the Faroese people and that fishing harvest rights<sup>29</sup> are revocable without paying any compensation to the holders of those rights. Additionally, fishing should be as free as possible.

Thus the policy objectives sought are to be attained without giving holders of fishing harvest rights any legal guarantees over the exclusivity of said rights. The current arrangement may be considered to be in line with the idea that the resource belongs to the people, not to those who are utilising it, an idea further substantiated by the fact that all fishing harvest rights are due to expire either on 1 January 2018 or 1 January 2023 (see further, Section 3.4).<sup>30</sup>

### 3.3 Division of the fishing fleet

The Faroese fishing fleet broadly speaking may be divided into three parts: vessels that harvest in accordance with the domestic effort quota management system, industrial trawlers that harvest more or less outside the Faroese maritime territory, and the pelagic fleet that harvests both inside and outside the Faroese maritime territory. As a general rule, the latter two conduct their fishing under a catch quota system, where the individual vessel quotas are transferable, subject to certain conditions. These two vessel groups are not of interest here. The focus of this article is solely on the effort quota management system and the vessels that operate within it.

### 3.4 Fundamental pillars of the system

Since the introduction of a comprehensive effort quota management system for the domestic demersal fisheries in 1996, the following have become the core pillars of the system:

- i. The Faroese Parliament (f. Løgtingið) is obliged to amend the CFA annually in order to stipulate the total number of fishing days for that year. Before this decision is taken, the experts of the Faroese Marine Research Institute (MRI) provide the minister in charge with their estimation of the spawning stock biomasses of the main fish stocks. On this basis the MRI recommends

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29. In this article the term ‘fishing harvest rights’ will be used broadly, i.e., it refers to conditions that must be fulfilled by an individual or an individual entity to engage in commercial fisheries. Normally these conditions include fishing permits and quotas.

30. See art. 7 b (1) of CFA.



measures required to keep the fishing mortality rate at a sustainable level.<sup>31</sup> The Fishing Day Committee, a special body comprised mainly of fishing industry representatives, also makes recommendations on the number of fishing days.<sup>32</sup> Following these two recommendations, the minister prepares a bill that is presented to Parliament and enacted into law no later than August 18<sup>th</sup> every year. Thus, it is always Parliament that sets the annual total fishing days for each fishing year, which commences 1 September and ends 31 August.

- ii. In order to conduct commercial fishing, a fisherman has to possess a fishing vessel with a harvesting licence (f. *veiðiloyvi*).<sup>33</sup> Regulations regarding harvesting licences create in effect a closed-shop arrangement, i.e. an entry/exit scheme, which ensures that no new fishing vessels enter the fishing fleet unless an existing fishing vessel with a similar capacity is decommissioned.<sup>34</sup> In addition to this, a fishing vessel has to have a fishing licence (f. *fiskiloyvi*) that states, *inter alia*, its allocated fishing days.<sup>35</sup> This makes the fishing permit system twofold since operators of vessels can hold only one harvesting licence but several fishing licences. This underlines the dichotomy between the harvesting licence, which is attached to a vessel for the long-term, and the fishing licence, which is only valid within each fishing year or other specified fishing period.
- iii. All harvesting licences are due to expire 1 January 2018.<sup>36</sup> In addition, all fishing licences and any accompanying fishing rights linked with harvesting licences, e.g. fishing days, are also due to expire on that day. Nevertheless, the government may extend all licences and accompanying fishing rights an additional five years.<sup>37</sup> There is no statutory assurance of what will happen after either 1 January 2018 or 1 January 2023.

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31. This recommendation is to be given to Parliament no later than 15 June, c.f. art. 22(2)(1) of CFA. In addition to the MRI recommendation, the International Council for the Exploration of the Sea (ICES) publishes reports in May or June every year on the status of the demersal fish stocks in Faroese waters and future harvesting prospects.

32. This recommendation is to be given to Parliament no later than 22 June, c.f. art. 22(3) of CFA. Further rules on the Fishing Day Committee are stipulated in art. 5(10) of CFA.

33. See art. 5(3) of CFA.

34. See art. 8 of CFA.

35. See art. 5(4) of CFA.

36. See art. 7 b (1) of CFA.

37. See art. 7c of CFA.

- iv. The number of total fishing days is first divided among vessel groups, and then amongst individual vessels within each group. Initially all vessels were allocated the same number of fishing days. However, since harvesting licences and fishing days are transferable, the distribution of fishing days within the various vessel groups is no longer equal among all participants. As a rule, transferability of these rights is only permissible within and not between vessel groups, and is further restricted in accordance with a variety of rules. For instance, aggregation limits are applicable to prevent concentration of ownership over fishing harvest rights.<sup>38</sup>

These fundamental pillars of the Faroese effort quota management system will be scrutinised further in the following sections with regard to three criteria: (1) biological measures, (2) participation measures, and (3) economic measures.

### 3.5 Biological measures

The Faroese effort quota management system is premised on the idea that it is possible to protect demersal fish stocks and their habitat entirely through input regulation. Attempts are made to restrain and control many aspects of the effort capacity of the fishing fleet, making total time allotted for fishing very important.

Parliament sets the total allowable fishing days, not the Minister of Fisheries. The Faroese Economic Council has highlighted this as being unusual:

Every year, Parliament decides upon the total fishing days in the fishing day system. As far as the Economic Council is aware there is no other example in the Western world where the political system (Parliament) directly sets the total allowable catch or effort, as is done in the Faroes. The standard procedure is that the Ministry of Fisheries or another body under its authority decides upon the pressure of the fish stocks.<sup>39</sup>

This rare arrangement is problematic, since political responsibility is shared among 33 members of Parliament, instead of being delegated to a single body, such as the Ministry of Fisheries. As a result, no specific public authority or individual is responsible (or accountable) for setting and implementing total fishing day decisions to ensure sustainable utilisation of the demersal fish stocks within the Faroese EEZ. Members of Parliament have significant influence over the final decision. This arrangement leaves the system vulnerable to recurrent lobbying pressure

38. See art. 7a of CFA.

39. Búskaparráðið 2012 p. 24 (authors' translation).

from a variety of interest groups, including the commercial fishing industry, and systematic rejection of sound scientific advice on catch and effort levels. This last claim needs to be further explained.

In 1995, when designing the effort quota management system, it was expected that on average the fishing mortality rate ( $F$ )<sup>40</sup> of cod, haddock and saithe should not exceed 0.45.<sup>41</sup> Such a biological benchmark has neither been laid in statute nor in any further regulation. Furthermore, Parliament has not adopted any guiding principle for setting the total number of fishing days.<sup>42</sup> The marine scientists of the International Council for the Exploration of the Sea (ICES) have for a long time held that a suitable fishing mortality for these three stocks should be much lower than 0.45.

Mainly due to overfishing, the three demersal stocks are now considered to be in very poor shape. For instance, experts at ICES have recommended a total ban on direct haddock fishing for 2014,<sup>43</sup> as they have done every year since 2009.<sup>44</sup> For the cod stock on the Faroe Plateau, ICES recommended that “effort should be reduced such that fishing mortality in 2014 will be no more than  $F = 0.16$ , corresponding to a 69 % reduction in the present fishing mortality”.<sup>45</sup> The recommendation for saithe was a 46 % reduction in fishing mortality for 2014.<sup>46</sup> In spite of such repeated recommendations by international marine scientists, and the relatively rapid decline of demersal catches within the Faroese EEZ for the past few years, the process of deciding fishing days has remained unchanged. For a variety of reasons the current system has been unable to sufficiently reduce the number of fishing days to ensure sustainable demersal fisheries in the Faroe Islands, and therefore the system has by and large been unsuccessful.

Another important assumption behind the current effort quota management system has failed to materialize as predicted. When the system was designed, the fleet was expected to target the most abundant fish stock for efficiency reasons. In theory this would maintain fishing mortality of all stocks at relatively equal levels and prevent overharvesting of any one species. However, since the value of cod is higher than that of haddock and saithe, individual fishermen are incentivized

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40. According to ICES glossary  $F$  is “instantaneous rate of fishing mortality; when fishing and natural mortality act concurrently,  $F$  is equal to the instantaneous total mortality rate ( $Z$ ), multiplied by the ratio of fishing deaths to all deaths”.

41. Jákupsstovu et al. 2007 p. 731.

42. Fiskimálaráðið 2011 p. 9.

43. ICES Advice 2013: *Haddock in Subdivision Vb* p. 1.

44. Ibid. p. 6.

45. ICES Advice 2013: *Cod in Subdivision Vb1 (Faroe Plateau)* p. 1.

46. ICES Advice 2013: *Saithe in Division Vb* p. 1.

to catch as much cod as possible, despite its decreasing abundance relative to the other two species, ensuring even more pressure on the cod stock. Thus, contrary to expectations, “the economic factors seem to be more important than the relative abundance of the stocks in determining which species is targeted”.<sup>47</sup>

Apart from using the effort quota management system to bring about sustainable harvesting of the demersal fish stocks, various technical measures have been put in place, e.g. minimum mesh size, area closures during spawning seasons, and area restrictions. Faroese fishing grounds have also been divided into inner and outer fishing grounds, with the outer being from 12 to 200 nautical miles. This division is in place in part to protect juvenile fish but also to separate vessels using different types of gear and their conflicting interests.<sup>48</sup> The Fisheries Directorate has the authority to enact immediate area closures lasting up to two weeks at a time if the number of juveniles of the three main species caught exceeds 30 %. The Directorate can for the same reason ban certain types of gear in particular areas.<sup>49</sup> In addition to these sustainability measures, discarding and misreporting of catches is banned<sup>50</sup> and a system of surveillance and enforcement is in place.<sup>51</sup>

### 3.6 Participation measures

The core aims of the Faroese effort quota management system are to regulate the fleet’s total fishing time and to keep the effort capacity of the fleet at a reasonable level. In line with these objectives, complicated rules have been promulgated to restrain the number of active fishing vessels and their capacity to fish. It also follows from these objectives that all harvesting rights in the Faroese effort quota management system are linked to ownership of a fishing vessel sailing under the Faroese flag.<sup>52</sup>

Participation of foreigners in commercial fishing activity is limited since it is not possible to conduct commercial fishing without owning a fishing vessel whose home port is in the Faroe Islands. Owners of Faroese vessels must have a perma-

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47. ICES Advice 2013: Cod in Subdivision Vb1 (Faroe Plateau) p. 6.

48. Jákupsstovu et al. 2007 p. 731.

49. All these technological measures are explained in Jákupsstovu et al. 2007 p. 731.

50. See art. 10(4) of CFA.

51. Discarding and misreporting of catches is estimated to be a minor problem in Faroese demersal fisheries, c.f. for instance Jákupsstovu et al. 2007 p. 736; ICES Advice 2013: *Cod in Subdivision Vb1 (Faroe Plateau)* p. 4; ICES Advice 2013: *Haddock in Subdivision Vb* p. 2; ICES Advice 2013: *Saithe in Division Vb* p. 2.

52. See article 7(1) of CFA.

nent link to the country.<sup>53</sup> If a legal entity owns a fishing vessel, it has to be registered in the country and fulfil various conditions, the most important being that at least a two-thirds ownership interest of the legal entity is in the possession of persons with a permanent link to the Faroe Islands.<sup>54</sup>

In accordance with the existing article 28(1) of CFA, the Faroese fishing fleet in the effort quota management system is divided into the following main vessel groups:

- i) Trawlers (group two).<sup>55</sup>
- ii) Long-liners, larger than 110 tons (group three).<sup>56</sup>
- iii) Coastal vessels, larger than 15 tons but smaller than 110 tons (group four).<sup>57</sup>
- iv) Coastal vessels, smaller than 15 tons and using jigs (group five).
- v) Other vessels (group six).

The current division of the fishing fleet has to be put into historical perspective. The division of vessel groups has now changed, e.g. the trawler group was previously divided into two categories, large single trawlers and pair-trawlers.<sup>58</sup> It is also worth noting that since 1 January 1995, a moratorium has been in place on issuing a larger number of harvesting licences.<sup>59</sup> Table 1 shows the number of harvesting licences among vessels larger than 15 tons in 1995 and 2011.

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53. That permanent link is defined in some detail in the legislation, for instance, the relevant owner has to have had a registered legal domicile in the Faroes and been obliged to pay taxes in the Faroes for the past two years, c.f. art. 7 (2) of CFA.

54. See further articles 7(3)–7(8) of CFA.

55. Vessel group one has merged with vessel group two so no longer exists.

56. The concept tons is defined in article 5(13) of CFA but it refers either to Gross Tonnage (GT) or Gross Register Tonnage (GRT) of the relevant fishing vessel.

57. This vessel group is subdivided into three vessel groups when it comes to allocation of fishing days.

58. The traditional trawlers were only allowed to catch demersal fish stocks as by-catch (they were not part of the effort quota management system), while pair-trawlers were part of the effort quota management system from the outset.

59. See art. 31 of CFA.

**Table 1: Number of harvesting licences of those fishing vessels larger than 15 tons in 1995 and 2011, divided according to vessel group.<sup>60</sup>**

Vessel group	1995	2011
Trawlers	48	36
Long-liners*	19	20
Coastal vessels from 15–40 tons (long-lining and jigging)	50	21
Coastal vessels larger than 40 tons but smaller than 110 tons (long-lining and jigging)	35	22
Coastal vessels larger than 40 tons but smaller than 110 tons (trawling)	19	12
Total number	171	111

\* In 2005 a change was made with the effect that fishing vessels over 110 tons were defined as large long-liners, while vessels smaller than 110 tons were moved to the group of vessels larger than 40 tons but smaller than 110 tons. This explains why the number of larger long-liners was higher in 2011 than in 1995.

As table 1 indicates, a decrease in the number of vessels larger than 15 tons took place between 1995 and 2011. However, the number of allocated harvesting licences only indicates how many fishing vessels are active in the vessel groups that need harvesting licences to conduct commercial fishing. Fishing vessels below 15 tons – those fishing with long-lines or jigs (group five) – have never been required to possess such a licence. A fishing licence is sufficient for them to conduct demersal fishing.<sup>61</sup>

The decrease in harvesting licences is not reflective of a concurrent decrease in effort capacity; rather, the opposite is more likely the case. Since 1996, Faroese vessel operators within the effort quota management system have been permitted to renew their vessels. Certain limitations are in place when such renewals occur, and article 8 of CFA and regulations set in line with that provision cover this topic.<sup>62</sup> It follows, *inter alia*, from this regulatory framework, that fishing effort capacity shall be calculated based on the size of a vessel and its engine capacity, and that the original fishing effort capacity can only be improved by 15 per cent and by approval of the Ministry of Fisheries.

These rules apply when an old vessel is replaced while neither in CFA nor in government regulations is it explicitly stated that vessel operators are forbidden to

60. Búskaparráðið 2011 p. 16. See also Fiskimálaráðið 2010 p. 12.

61. See art. 5(3) of CFA, c.f. art. 28(1) of CFA.

62. See for instance Regulation No. 75/2006 on assessment of effort fishing capacity when a fishing licence is transferred between vessels 15 tons and larger, as amended by Regulation No. 132/2011.

alter their vessels to increase their effort capacity. This means that vessel operators have been able to restructure their vessels in order to increase their effort capacity. The authors are not aware of any procedures or steps taken by the government to regularly monitor potential changes of each fishing vessel with a harvesting licence, and the effects that such changes might have on its effort capacity. It can be concluded that those operating in the effort quota management system in practise have been able to increase the effort capacity of their vessels since 1996. In addition, the number of vessels in vessel group five has, until recently, been limited in a relaxed way. This despite the fact that vessel group five has landed a considerable portion of the demersal catches, for instance, more than 25 % of the total cod catch in the period 2002–2007.<sup>63</sup>

### 3.7 Economic measures

Two methods are applied to enhance the economic efficiency of the fishing fleet. First, total fishing days are allocated amongst vessel groups and individual vessels. Second, individual fishing days are transferable, subject to certain conditions. The legal basis of these methods now follows.

The term ‘fishing day’ is defined in article 5(5) of CFA:

One fishing day is each 24 hours that a fishing vessel has been operating at sea during the fishing year. Each fishing trip has commenced when the fishing vessel has left port and ends when the vessel returns to port. Each commenced fishing trip counts for at least 24 hours. For fishing vessels in vessel group 5 in accordance to article 28(1), each fishing trip counts as one fishing day even if the trip is longer than 24 hours.

One fishing day is 24 hours and each commenced fishing trip counts as at least 24 hours. A fishing trip starts when a vessel leaves port and ends when it returns to port. For vessels in group five, each fishing trip is 24 hours, even if it lasts longer than 24 hours. Therefore these vessels are effectively allocated fishing trips, not fishing days.

Currently article 28(2) of CFA stipulates, *inter alia*, how annual total fishing days (as a percentage) are to be divided among vessel groups in the three most important demersal stocks, see table 2.

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63. Fiskimálaráðið 2008 p. 26.



Table 2: Allocation of fishing days among vessel groups, measured in percentages.

Vessel group/stock	Cod	Haddock	Saithe
Trawlers (group two)	25 %	12 %	82 %
Long-liners, larger than 110 tons (group three)	37 %	45 %	0
Coastal vessels, larger than 15 tons but smaller than 110 tons (group four)	17 %	17.5 %	11.5 %
Coastal vessels, smaller than 15 tons, catching by jigging (group five)	20 %	23.5 %	6 %
Other vessels (group six)	1 %	2 %	0.5 %

These long-term allocation keys have remained more or less the same since 1996.<sup>64</sup> In principle, the initial allocation of fishing days to vessel groups was based on the average amount of effort utilised per day in the period 1985–1994.<sup>65</sup> The main allocation criterion was based on past participation of economic operators, what may be termed ‘grandfathering’. The principle has been to distribute the number of fishing days equally among individual vessels within vessel groups two, three and four. However, this division is no longer equal since fishing days are transferable subject to certain conditions, both during the fishing year and for the long term.

Owners in vessel group five have traditionally been divided into two, commercial fishermen and recreational fishermen, where the latter are greater in number than the former. Allocation of fishing days in vessel group five has been based on premises different from those of vessel groups two, three, and four. First, the fishing days belonging to the entire vessel group are divided so that full-time fishermen receive 60 % and recreational 40 %. Second, each professional fisherman acquires a certain number of fishing days, while recreational fishermen have a joint pool of fishing days, with the effect that recreational fishermen have to stop fishing when the total number of fishing days has expired, although in practice all fishing days are rarely used.<sup>66</sup>

All vessels in groups two, three, and four can transfer harvesting licences, albeit only within their own vessel group.<sup>67</sup> Therefore, a vessel without a harvesting licence can replace a vessel with a licence, or the harvesting licence of an existing vessel can merge with another vessel with the effect that two harvesting licences

64. In this context one has to bear in mind that ‘[s]ome vessels may move from one fleet to another by changing gears’, c.f. Jákupsstovu et al. 2007 p. 731. Thus, some flexibility has been allowed for owners of vessels to change the vessel group status of the vessel.

65. See further Jákupsstovu et al. 2007 p. 731.

66. Fiskimálaráðið 2007 p. 55.

67. See art. 8(1)(2) of CFA.

become one. All fishing rights associated with the harvesting licence, including fishing days, continue to be attached to the vessel holding the licence. The principal condition for transferring harvesting licences is that the recipient vessel does not have a higher effort capacity than the vessel from which the licence was transferred.<sup>68</sup> Additional restrictions apply, e.g. a harvesting licence may not be transferred from a vessel smaller than 15 tons to a larger vessel, and *vice versa*. The same regulations apply to transfers of harvesting licences to a vessel less than 110 tons, and *vice versa* (i.e. between vessels in different sub-groups in vessel group four). Since vessel group five is not required to have harvesting licences, the aforementioned rules in principle do not apply to them.

From the outset, it has been permissible within the Faroese effort quota management system to transfer individual fishing days. Long-term transfers and transfers within the fishing year are allowed. The conditions for fishing day transfers are stipulated in article 14 of the CFA, and regulations set in accordance with that provision of the Act. The following main principles can be deduced from the regulations:

- i) Fishing day transfers can principally only take place within each vessel group. Only owners of vessels that utilised 60 % of their fishing days in the previous fishing year are permitted to transfer fishing days, permanently and within the fishing year.
- ii) It is forbidden to transfer fishing days from a vessel with a fishing licence that uses long-lines or jigs to a vessel using trawl, and *vice versa*. This means it is forbidden to transfer fishing days from two of the sub-vessel groups within vessel group four, i.e. from those that use long-lines or jigs to those that use trawl.
- iii) When three months are left of a fishing year, fishing days for that fishing year only can be transferred between vessel groups, subject to certain conditions.<sup>69</sup> In order to estimate the change in effort capacity when fishing days are transferred between vessel groups – and therefore vessels with different effort capacities – complicated rules apply for measuring the number of fishing days of any given transaction. For instance, 18 fishing days for a

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68. See art. 8(1)-(3) of CFA.

69. However, a vessel with a fishing licence for long-lining or jigging cannot transfer its fishing days to a vessel with a fishing licence to use trawl (group two and a sub-vessel group of vessel group four).

long-liner in vessel group four may be equivalent to six fishing days for a long-liner in vessel group three.<sup>70</sup>

- iv) The recipient vessel naturally gains an increase in its long-term proportional fishing day rights after a permanent transfer of fishing days, though the actual number of fishing days may vary from one year to another, depending upon the total number of fishing days allocated to each vessel group.
- v) Aggregation limits are in place to prevent a concentration of ownership in fishing vessels with a high level of fishing days attached to them. For instance, as a general principle, persons who are involved in commercial fisheries are not allowed to hold more than 20 % of the total fishing days in vessel groups two, three, and four. However, fishing days can be transferred so that they exceed the above but only for one fishing year at a time.<sup>71</sup>

### 3.8 Policy outcomes – summary

As demonstrated, the main domestic demersal stocks within Faroese maritime territory are currently estimated to be in a poor state. The spawning stock biomasses of the most important stocks are currently at low levels and fishing mortality has generally been excessive since 1996.<sup>72</sup> The on-going sustainability crisis is described and analysed in a report published by the Faroese Economic Council in the autumn of 2012.<sup>73</sup>

The procedure of the parliament [*sic*] stipulating an annual maximum of allowed days-at-sea across the varying groups of fishing boats has proven to be nearly impossible to manage sustainably. Case in point, although the number of days-at-sea in the system has gone down by more than 50 per cent since 1996–1997, the effort on the cod stock on the Faroe Shelf is still above the recommendations of marine biologists.

In addition to the sustainability issues presented here, ‘technological creep’ appears to be unavoidable. The Faroese Economic Council describes the phenomenon in the following way:<sup>74</sup>

... the fishing fleet will become more efficient through improved technology and equipment, in spite of the fishing fleet remaining the same size (or even decreasing).

70. See Regulation No. 3/2011 on transfer of fishing days, as amended by Regulation No. 134/2011.

71. See further, art. 7 of CFA.

72. ICES Advice 2013: Cod in Subdivision Vb1 (Faroe Plateau); ICES Advice 2013: Haddock in Subdivision Vb; ICES Advice 2013: Saithe in Division Vb.

73. Faroese Economic Council 2012 p. 23. Original in English.

74. Faroese Economic Council 2012 p. 23.

This should also give rise to a gradual decrease in days-at-sea. These unfortunate characteristics make it almost impossible to sustainably manage the fishery.

Apart from failing to ensure reasonable policy outcomes by implementing sustainability and participation measures within the Faroese effort quota management system, vessel groups within the system have struggled financially. The Faroese Economic Council sums up the economic situation of the domestic fishing fleet in the following manner:<sup>75</sup>

“The profitability in the domestic fleet has for many years been poor due to fisheries being affected by the historically poor state of many important fish stocks – caused by high fishing intensity and effort ... The poor results of the fisheries in Faroese waters are costly for the Faroese economy. The total catches of cod on the Faroe Shelf has since 2004 been around 10,000 tons annually. This is well below the 100-year average of 25,000 tons annually.”

## 4 The future

Whatever the reasons, it is obvious that the Faroese effort quota management system has failed. The policy failures pose two fundamental questions for the future of demersal fisheries management in the Faroe Islands. First, are there any legal barriers against radically altering the system or even adopting a new one? Second, is it likely that Faroese policy makers will opt for radically changing the management of the demersal fisheries within the Faroese maritime territory? Some light will now be shed on these two questions.

### 4.1 Legal issues – can things change?

The Faroe Islands are a part of the Kingdom of Denmark and therefore the property protection clause of the Danish Constitution applies.<sup>76</sup> This constitutional provision offers holders of fishing harvest rights legal protection if it is determined that these rights fall under the term ‘property’. Traditionally this term has been interpreted widely, having, *inter alia*, the effect that “commercial rights acquired directly under legislation or under a public licence are protected”.<sup>77</sup> Accordingly, this constitutional provision at some extent safeguards the rights to harvest marine fish stocks for commercial purposes in the Faroe Islands. However, these rights

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75. *Ibid.* p. 20.

76. The wording of article 73(1) of the Danish Constitution is as follows: “The right of property shall be inviolable. No person shall be ordered to cede his property except where required in the public interest. It can be done only as provided by Statute and against full compensation.”

77. Jensen 2007 p. 124.

are neither irrevocable nor immutable<sup>78</sup> since “rights based on public law enjoy a lower degree of protection than rights based on private law”.<sup>79</sup>

In principle, the legislature has a wide margin within which to alter the nature of fishing harvest rights, without compensating the holders of those rights. However, such radical changes would need to be laid down in statutory legislation and supported by public interest considerations. Nevertheless, the CFA protects the interests of fishing harvest rights holders until 1 January 2018. Thus, prior to 2018, the legislature has limited scope to remove the rights without compensating rights holders.

However, this conclusion does not necessarily stand up under close examination. For instance, if a new management system were to be adopted prior to this date, such as a catch quota system, and the interests of fishing harvest rights holders were protected by allocating them fishing harvest rights in the new system, then such a policy change does not necessarily violate the property rights of the fishing harvest rights holders. It is also clear that the Faroese legislature can, in the interests of protecting the fish stocks, temporarily ban all fishing for some fish species. This is possible to implement without paying any compensation to holders of fishing harvest rights.

In this context it is also important to bear in mind that the aforementioned articles 2 and 3 of the CFA lay down policy principles that underline the public nature of the resource, and that rights of use do not amount to traditional property. These policy principles strengthen even further the latitude of the legislature to radically change a fisheries management scheme that has failed to achieve its declared policy objectives.

## 4.2 Policy issues – will things change?

The small size of the Faroese population makes policy-making in the critical area of fisheries management difficult. It is invariably affected by the fact that when fishing days are adjusted or regulatory changes are implemented, politicians are interfering with the interests of individuals, legal entities, and communities, and these groups are likely to use their lobbying power to steer the political process in their favour. In this context, it is helpful to recall that many members of Parliament over the years have had strong ties to the fishing industry. If powerful forces within the industry are opposed to any radical changes of the management scheme, alternative solutions become difficult to implement politically.

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78. Ibid.

79. *Ibid.* Property rights issues in the context of Faroese fisheries management is briefly discussed in Fiskimálaráðið 2007 p. 8–9; Hansen and Jákupsstovu 2010 p. 10; Fiskimálaráðið 2012a p. 7.

Marine fishing is more than an industry to the Faroese. Exploiting ocean resources is seen as an intrinsic part of being Faroese to almost everyone, young and old alike. This explains in part why the views of marine scientists on the status of the fish stocks are generally not considered to carry any more weight than those of fishermen, vessel owners and politicians. Members of Parliament, who set the total allowable fishing days, do not necessarily interpret it as a major resource crisis when international marine scientists many years in a row suggest a serious reduction in fishing mortality rate of the demersal fish stocks be undertaken to ensure the sustainability of the three main species. Politicians may simply not believe that stock reductions stem from overfishing but rather result from changes in the environment. From this perspective a radical overhaul of the effort quota management system seems unlikely.

The continuing depletion of the demersal fish stocks within the Faroese maritime territory may have serious economic consequences. Even though the situation has been mitigated temporarily in light of the boom in the Faroese pelagic fisheries over the last few years, and the fast-growing fish farming industry, it is not acceptable in the long run for operators in the domestic demersal fisheries industry on average to be losing money on their commercial activities. Eventually some measures will have to be implemented to correct this situation. It is this growing necessity that is most likely to persuade Faroese policy-makers to develop solutions that will function to achieve the desired policy objectives of sustainable and profitable demersal fisheries.

## 5 Conclusions

The present analysis has argued throughout that the policy outcomes of the Faroese effort quota management system are both poor and unsatisfactory. International experts estimate that the main demersal fish stocks within the Faroese maritime territory are at historic lows, an estimate that has been consistent for some years now. Although some amendments may be made to the system in order to maintain fishing mortality at a reasonable rate, individual harvesters are likely to find ways to increase their effort capacity. This 'technological creep' is difficult to avoid in such a management system.

In light of the poor policy outcomes, the Faroese government should, in principle, be able to make radical changes to the effort quota system, or even abolish it. Current holders of fishing harvest rights cannot justifiably expect societal institutions to remain idle while the domestic demersal fishing industry continues in its current trajectory of terminal decline. Yet it is legitimate to take into account the



fact that current holders of fishing harvest rights should have reasonable expectations of continuing their economic operations.

Changing the effort quota system will not be easy for the Faroese. While it is not possible to isolate a specific cause of the overall failure of the system, it ultimately comes down to the inability of the political apparatus to limit access to the resource and participants' desire to maximize their own share. The Faroese feel they have an inherent right to fish. This is reflected in the many choices made throughout the political process, leading to a system where few, if any, are held accountable. Accordingly, the difficult policy decisions necessary to ensure sustainable and profitable fisheries have quite simply not been made.

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